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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,919	09/01/2006	Jude A. Oben	OB080-000B/DWN	1397

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EXAMINER	
KASIREDDY, CHANDRAPRAKA	
ART UNIT	PAPER NUMBER
1609	
MAIL DATE	DELIVERY MODE
07/11/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/550,919	OBEN ET AL.	
	Examiner	Art Unit	
	CHANDRAPRAKASH KASIREDDY	1609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 September 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-8* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification

The abstract of the disclosure is objected to because

(1). It is unclear which of the 2 filed abstracts (the WIPO abstract and another abstract, filed alone) the applicant intends to be the official, as the other abstract is not marked up and contains diverging subject matter from the WIPO abstract. Examiner requests information regarding which abstract is to be considered official.

(2). The term "prazocin" should be corrected to "prazosin."

See MPEP § 608.01(b). Appropriate correction is required.

The disclosure is objected to because of the following informalities:

The term "propanalol" (Page 1, paragraph 4) should be corrected to "propanolol". Appropriate correction is required.

Claim Objections

Claim 8 is objected to because of the following informalities:

The term "propanalol" should be corrected to "propanolol."

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1- 8 are rejected under 35 U.S.C. 102(b) as being anticipated by McLean (US 6,174,917 B1, date of patent Jan 16, 2001)

The instant claims are related to a method of treating liver disease comprising manipulating the expansion of the hepatic stem cell population of a subject at risk of suffering from liver disease by administering to said subject at least one regulator of the sympathetic nervous system.

McLean teaches a method for the treatment of liver disease selected from the group consisting of cirrhosis of the liver, toxic and medicamentary liver damage, a liver-parenchymic disorder or hepatic, comprising administering orally to a human or animal subject in need thereof a low dose of a vasodilating agent where by said vasodilating agent selectively increases the supply of oxygenated blood to the liver by increasing hepatic arterial inflow with no significant fall of systematic arterial blood pressure. Wherein the vasodilator is selected is selected from group consisting of debrisoquine, clonidine, doxzosin, prazosin, labetalol, irbesartan, lydrallazine, minoxidil and amladipine and the vasodilating agent is administered in a slow release formulation. (See claims 1, 5 and 6 and Page 3, lines 30-35).

McLean further teaches other nerve processes which mediate contraction these are the purnergic and neuropeptide Y transmitter and receptor systems and vasodilators, which act on these nerve processes, may be used in

accordance with the design. There is a range of receptor types, which may be targeted to provide the vasodilator effect, these include ∝ adrenergic (including ∝1A, ∝1B, ∝1C), ∝2 adrenergic (including ∝2A, ∝2B and ∝2C), neuropeptide Y (including Y1 and Y2) and Purinergic. (See column 3, lines 64 –67).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1 to 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over McLean (US 6,174,917 B1), Albillos et al. (Gastroenterology, 1995; 109(4): 1257-65) and Hayes et al. (Quarterly journal of medicine 1987, 65 page 823-834).

The instant claims are related to a method of treating liver disease comprising manipulating the expansion of the hepatic stem cell population of a

subject at risk of suffering from liver disease by administering to said subject at least one regulator of the sympathetic nervous system

McLean teaches a method for the treatment of liver disease selected from the group consisting of cirrhosis of the liver, toxic and medicamentary liver damage, a liver-parenchymic disorder or hepatitis, which method includes administering orally to a human or animal subject in need thereof a vasodilating agent at a dose less than the oral dose required to produce a significant effect on the heart or peripheral circulation where by said vasodilating agent selectively increases the supply of oxygenated blood to the liver by increasing hepatic arterial flow. (See column 2, lines 23-32). One specific class of vasodilators acts on catecholamine transmitters and are termed alpha-adrenergic blocking agents. Example of vasodilator includes prazosin, labetalol, doxazosin etc.

Albillos et al. teaches in cirrhotic patients continuous prazosin administration reduces portal pressure and improves liver perfusion and function but favors sodium and water retention. The association of propranolol enhances the decrease in portal pressure, suggesting a potential benefit from this combined therapy. (Abstract).

Hayes et al. teaches that the study demonstrates that long term administration of propranolol in patients with liver disease is safe, free of adverse reactions and not associated with deterioration in liver function. (Page 833, lines 6 and 7).

It would have been obvious to one ordinary skill of the art at the time of

invention to combine the teachings of McLean, Albillos et al. and Hayes et al. One would have been motivated to do this because Hayes et al. teaches long term treatment with propranolol is safe in patients with liver disease and Albillos et al teaches that in cirrhotic patients, continuous prazosin administration reduces portal pressure and improves liver function. Thus the claimed invention is obvious over Hayes et al., in view of Albillos et al.

Conclusion

Claims 1- 8 are rejected.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHANDRAPRAKASH KASIREDDY whose telephone number is (571) 272-1600. The examiner can normally be reached on 9.00 AM TO 5.00 PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JEFFREY STUCKER can be reached on (571) 272-0911. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

JEFFREY STUCKER
SUPERVISORY PATENT EXAMINER